AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Claims 1-19. (Canceled)

20. (Currently Amended) A method of generating a transport stream, the method comprising:

reading an MPEG transport stream ~~recorded in~~directly from a recording medium, the MPEG transport stream including a series of transport packets;

generating a program managing information packet for indicating a discontinuity of the MPEG transport stream in a form of a transport packet;

inserting the generated program managing information packet at a connection point in the read MPEG transport stream when a discontinuity occurs in the MPEG transport stream; and

transferring the MPEG transport stream including the inserted program managing information packet through a digital interface.

21-23. (Canceled).

24. (Currently Amended) The method of claim 20, wherein the ~~generated transport~~program managing information packet is inserted between two of the transport packets existing in the read MPEG transport stream.

25. (Previously Presented) The method of claim 20, wherein the recording medium is an optical disc.

26. (Previously Presented) The method of claim 20, wherein the MPEG transport stream is an MPEG-2 transport stream.

27. (Previously Presented) The method of claim 20, wherein the inserting step is performed within an optical disc player.

28. (Previously Presented) The method of claim 27, wherein the reading step is performed by the optical disc player.

29. (Canceled).

30. (Currently Amended) A method of generating a transport stream, the method comprising:

recording an MPEG transport stream including a series of transport packets carrying data ~~on~~ directly on a recording medium such that the MPEG transport stream can be read directly from the recording medium, said MPEG transport stream to be transmitted through a digital interface;

reading the recorded MPEG transport stream from the recording medium;

generating a program managing information packet for indicating a discontinuity of the

MPEG transport stream in a form of a transport packet;

inserting the generated program managing information packet at a connection point of the read MPEG transport stream when a discontinuity occurs in the MPEG transport stream; and

transmitting the MPEG transport stream having the program managing information packet inserted therein through the digital interface.

31-32. (Canceled).

33. (Currently Amended) The method of claim 30, wherein the ~~generated transport~~program managing information packet is inserted between two of the transport packets existing in the read MPEG transport stream.

34. (Previously Presented) The method of claim 30, wherein the recording medium is an optical disc.

35. (Previously Presented) The method of claim 30, wherein the inserting step is performed within an optical disc player.

36. (Previously Presented) The method of claim 35, wherein the reading step is performed by the optical disc player.

37. (Canceled).

38. (Currently Amended) An apparatus for generating a transport stream, the apparatus comprising:

a reproducing part configured to read an MPEG transport stream ~~recorded in~~directly from a recording medium, the MPEG transport stream including a series of transport packets carrying data and to be transferred through a digital interface, and to insert a program managing information packet for indicating a discontinuity of the MPEG transport stream at a connection point of the read MPEG transport stream when a discontinuity occurs in the MPEG transport stream; and

a transmitting part configured to transmit the MPEG transport stream having the program managing information packet inserted therein through the digital interface,

wherein the reproducing part ~~generates~~ is further configured to generate the program managing information packet in the form of a transport packet, and ~~inserts~~ to insert the generated transport packet into the read MPEG transport stream.

39-41. (Canceled).

42. (Currently Amended) The apparatus of claim 38, wherein the reproducing part ~~inserts~~ is further configured to insert the ~~generated transport~~program managing information packet between two of the transport packets existing in the read MPEG transport stream.

43. (Previously Presented) The apparatus of claim 38, wherein the recording medium is an optical disc.

44. (Previously Presented) The apparatus of claim 38, wherein the MPEG transport stream is an MPEG-2 transport stream.

45. (Previously Presented) The apparatus of claim 38, wherein the apparatus is an optical disc player.

46. (Canceled).

47. (Currently Amended) An apparatus for generating a transport stream, the apparatus comprising:

a recording/reproducing part configured to record an MPEG transport stream including a series of transport packets carrying data directly on a recording medium such that the MPEG transport stream can be read directly from the recording medium, said MPEG transport stream to be transmitted through a digital interface; to read the recorded MPEG transport stream from the recording medium; and to insert a program managing information packet indicating a discontinuity of the MPEG transport stream at a connection point of the MPEG transport stream when a discontinuity occurs in the MPEG transport stream; and

a transmitting part configured to transmit the MPEG transport stream having the program managing information packet inserted therein through the digital interface,

wherein the recording/reproducing part ~~generates~~ is further configured to generate the program managing information packet in the form of a transport packet, and ~~inserts~~ to insert the generated transport packet into the read MPEG transport stream.

48-49. (Canceled).

50. (Currently Amended) The apparatus of claim 47, wherein the ~~generated transport~~program managing information packet is inserted between two of the transport packets existing in the read MPEG transport stream.

51. (Previously Presented) The apparatus of claim 47, wherein the recording medium is an optical disc.

52. (Canceled).

53. (Currently Amended) An apparatus for generating a transport stream, the apparatus comprising:

means for reading an MPEG transport stream ~~recorded~~ indirectly from a recording medium, the MPEG transport stream including a series of transport packets carrying data, the MPEG transport stream to be transferred through a digital interface;

means for generating a program managing information packet indicating a discontinuity of the MPEG transport stream in a form of a transport packet;

means for inserting the generated program managing information at a connection point of the read MPEG transport stream when a discontinuity occurs in the MPEG transport stream; and

means for transmitting the MPEG transport stream including the inserted program managing information through the digital interface.

54. (Currently Amended) An apparatus for generating a transport stream, the apparatus comprising:

means for recording an MPEG transport stream including a series of transport packets carrying data directly on a recording medium such that the MPEG transport stream can be read directly from the recording medium, said MPEG transport stream to be transmitted through a digital interface;

means for reading the recorded MPEG transport stream from the recording medium;

means for generating a program managing information packet indicating a discontinuity of the MPEG transport stream in a form of a transport packet;

means for inserting the program managing information packet at a connection point of the read MPEG transport stream when a discontinuity occurs in the MPEG transport stream; and

means for transmitting the MPEG transport stream having the program managing information packet inserted therein through the digital interface.

55. (Currently Amended) The method of claim 20, further comprising:

detecting a null time interval in the MPEG transport stream, said null time interval corresponding to said discontinuity,

wherein the inserting step inserts the program managing information packet into the detected null time interval.

56. (Currently Amended) The method of claim 30, further comprising:

detecting a null time interval in the MPEG transport stream, said null time interval corresponding to said discontinuity,

wherein the inserting step inserts the program managing information packet into the detected null time interval.

57. (Currently Amended) The apparatus of claim 38, further comprising:

a detecting part configured to detect a null time interval in the MPEG transport stream, said null time interval corresponding to said discontinuity,

wherein the reproducing part ~~inserts~~ is further configured to insert the program managing information packet into the detected null time interval.

58. (Currently Amended) The apparatus of claim 47, further comprising:

a detecting part configured to detect a null time interval in the MPEG transport stream, said null time interval corresponding to said discontinuity,

wherein the recording/reproducing part ~~inserts~~ is further configured to insert the program managing information packet into the detected null time interval.

59. (Currently Amended) The apparatus of claim 53, further comprising:

means for detecting a null time interval in the MPEG transport stream, said null time interval corresponding to said discontinuity,

wherein the means for inserting inserts the program managing information packet into the detected null time interval.

60. (Currently Amended) The apparatus of claim 54, further comprising:

means for detecting a null time interval in the MPEG transport stream, said null time interval corresponding to said discontinuity,

wherein the means for inserting inserts the program managing information packet into the detected null time interval.